

City of Lawrence  
TRAFFIC ENGINEERING DIVISION

MEMORANDUM

**TO:** Charles Soules, Director of Public Works  
Shoeb Uddin, City Engineer

**FROM:** David Woosley, Transportation/Traffic Engineer

**DATE:** 2 October 2008

**SUBJECT:** Flashing Yellow Arrow (FYA)

The Traffic Engineering Division recently implemented a new traffic signal display for "permissive" left-turn movements. It is referred to as a Flashing Yellow Arrow (FYA) and has been installed on Louisiana Street at 19<sup>th</sup> Street for northbound and southbound traffic.

For many years, engineers have had concerns that drivers turning left on a permissive circular green signal indication might inadvertently mistake that indication as implying the left-turn has the right of way over opposing traffic. A variety of different indications and signal face arrangements for permissive left-turns have been tried over the years. However, in the mid-1990s, a National Cooperative Highway Research Program Project was initiated to evaluate traffic signal displays for protected/permissive left-turn control.

The results of the research found the FYA to be well-understood by drivers and that it had significantly more correct responses and a lower fail-critical rate than the steady circular green permissive left-turn indication. In addition, the FYA eliminates the "yellow trap" that can occur in certain situations, provides more flexibility for left-turn control and actually gives more opportunity to make left-turns.

On March 20, 2006, the Federal Highway Administration issued a memorandum for Interim Approval for Optional Use of Flashing Yellow Arrow for Permissive Left Turns; and on December 6, 2007, the City of Lawrence received permission from the Federal Highway Administration to implement FYA displays.

Future installations planned in Lawrence include 6<sup>th</sup> Street at Vermont Street and 31<sup>st</sup> Street at Home Depot/Post Office, as well as at all new traffic signals with permissive left-turn phases.

**Here is what the new displays look like:**



Steady red arrow = Stop. No left turns allowed.

Steady yellow arrow = Prepare to stop.

Flashing yellow arrow = Left turns allowed, but must yield to oncoming traffic.

Steady green arrow = Left turns allowed.

If additional information is needed, please let me know.